

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Amended) A signal monitoring and integrity checking system for use in a Dense Wavelength Division Multiplexing (DWDM) network, comprising:
 - an optical network including a first asynchronous cross-connect and a second asynchronous cross-connect, each for connecting an incoming link to an interconnecting link;
 - a first performance monitor for said first asynchronous cross-connect;
 - a second performance monitor for said second asynchronous cross-connect;
 - at least one first multi-cast means for multi-casting the input of said first asynchronous cross-connect to at least one first monitor port on said first asynchronous cross-connect, said first performance monitor communicating with said first monitor port;
 - at least one second multi-cast means for multi-casting the input of said second asynchronous cross-connect to at least one second monitor port on said second asynchronous cross-connect, said second performance monitor communicating with said second monitor port;
 - each of said performance monitors for detecting protocol and determining an error rate in accordance with said protocol;
 - a subsystem including at least one comparison system for comparing the outputs from said performance monitors to detect where performance impairment is introduced.
2. (Cancelled)
3. (Previously Amended) The system of claim 1, further comprising a signalling means for signaling results of said at least one comparison means to a maintenance subsystem.
4. (Previously Amended) The system of claim 1, wherein said comparison system is part of an Operation, Administration, Maintenance and Provisioning sub-system.

5. (Currently Amended) A method for signal monitoring and integrity checking in a Dense Wavelength Division Multiplexing network, comprising steps of:

- 1) multi-casting [[the]] data at an input port of a first asynchronous cross-connect to a first connecting path and a first snooping path;
- 2) multi-casting [[the]] data at an input port of a second asynchronous cross-connect to a second connecting path and a second snooping path;
- 3) monitoring said first snooping path connected to said the multi-cast data of said step 1) with a first performance monitor, including:
 - determining the protocol of the data at said first snooping path, and
 - determining an error rate in accordance with said protocol;
- 4) monitoring said second snooping path connected to ~~said second~~ the multi-cast data of said step 2) with a second performance monitor, including:
 - determining the protocol of the data at said second snooping path, and
 - determining an error rate in accordance with said protocol;
- 5) comparing the output of said first performance monitor with the output of said second performance monitor;
- 6) signalling said result of the comparing step to an Operation, Administration, Maintenance and Provisioning (OAM&P) sub-system; and
- 7) at the OAM&P, in response to the result of the comparing step, detecting where performance impairment is introduced.

6. (Currently Amended) The method of Claim 5, wherein the monitoring steps each comprises the following step:

- 1) detecting [[the]] a line code of a connection to determine said protocol.